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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/687,485

10/16/2003

Robert W. Ratte

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05/30/2006

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EXAMINER

CANTELMO, GREGG

ART UNIT

PAPER NUMBER

1745

DATE MAILED: 05/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/687,485	<b>Applicant(s)</b> RATTE, ROBERT W.	
	<b>Examiner</b> Gregg Cantelmo	<b>Art Unit</b> 1745	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. No IDS appears to have been filed with the application prior to this office action.

### ***Drawings***

2. The drawings received October 16, 2003 are acceptable for examination purposes.

### ***Claim Objections***

3. Claim 19 is objected to because of the following informalities: the term "pacing" should be "placing. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

4. Claim 2 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the nickel sublayer being provided on the steel and the tin layer provided on the nickel, does not reasonably provide enablement for the tin layer being provided on the steel layer and the nickel layer provided on the tin layer. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. It is evident that when using two sublayers of nickel and tin, the placement of these sublayers in relation to one another and in relation to the steel and lead components is only enabled for one particular orientation since it is the outer sublayer of tin which improves the bonding between the nickel plated steel bolt and outer lead member. The claim however extends beyond the scope of the disclosure since it also encompasses other combinations not supported by the original disclosure.

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Applicant is advised to amend claim 2 to clarify the order or placement of each of the sublayers to overcome this rejection.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The terms "enhance the torque resistance", "enhanced torque resistance", "enhance a torque resistance" in claims 1-20 is a relative term which renders the claims indefinite. The terms are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Neither the claims nor the specification define the extent of enhancement with respect to the torque resistance thus the scope of the claimed enhancement is not disclosed with sufficient specificity thus rendering these terms indefinite. Applicant is advised to delete any terms to the enhancement of torque resistance from the claims.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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6. Claims 1, 4-6, 15-18 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 09-167610 (JP '610).

JP '610 discloses a battery part comprising: a lead member, a stainless steel bolt 3 having a male thread on one end, a layer of nickel formed on the bolt (abstract and Fig. 1 as applied to claim 1).

The battery part comprises a battery terminal with the bolt in mechanical engagement with the battery terminal (as applied to claim 4).

JP '610 discloses a battery part comprising: a lead member, a fastener at least partially embedded in the lead member, a layer of nickel formed on the bolt (abstract and Fig. 1 as applied to claim 5).

The battery part comprises fastener is in mechanical engagement with the battery terminal (as applied to claim 6).

JP '610 also discloses a method of forming a battery terminal comprising: placing a nickel coating on the exterior portion of bolt fastener 3 and embedding the fastener in a lead terminal by flowing molten lead around the fastener (abstract as applied to claim 15).

The nickel material is placed on a stainless steel stud bolt fastener or nut (abstract and paragraph [0003] and Fig. 1 as applied to claims 16-18).

The nickel is electroplated onto the fastener (abstract as applied to claim 20).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP '610.

The teachings of JP '610 have been discussed above and are incorporated herein.

The difference between claim 3 and JP '610 is that JP '610 does not teach of the thickness of the nickel plate.

The selection of the thickness of the plate is a result effective variable. A sufficient minimum thickness is required to sufficiently bond the bolt to the lead to secure the two elements together via the intermediate nickel layer. Any thickness which achieves this result thus is readily apparent to one of ordinary skill in the art. Further it would be cost-effective to achieve this by using a minimal amount of nickel plating on the bolt. Thus a thickness of less than 0.0003 inches would have been an obvious thickness that provided both the requisite plating of nickel on the steel bolt at an economical minimal thickness.

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Generally, differences in ranges will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such ranges is critical. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). In re Hoeschele, 406 F.2d 1403, 160 USPQ 809 (CCPA 1969).

### ***Allowable Subject Matter***

8. Claims 2, 7-12 and 19 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: none of the prior art of record appears to teach, fairly suggest or render obvious the invention of claims 2, 7-12 and 19. In particular: none of the prior art of record teach or sufficiently suggest providing the lead adherable material comprising a sublayer of nickel and a sublayer of tin (claim 2), of the layer of electrically conductive material including at least two sublayers (claim 7), or wherein the placing of a lead adherable coating comprises placing a layer of nickel on the fastener and a layer of tin over the nickel (claim 19).

In each of JP '610 and the remaining prior art of record, only a single layer is provided on the bolt and there is an insufficient teaching in the prior art of record to provide multiple layers or sublayers as define in each of claim 2, 7-12 and 19.

### ***Conclusion***

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9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. JP 2000-164199 and JP 07-211309 each disclose plating tin on a bolt in terminal assembly of a lead acid battery.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregg Cantelmo whose telephone number is 571-272-1283. The examiner can normally be reached on Monday to Thursday, 8:00-5:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pat Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



gc  
May 25, 2006

Gregg Cantelmo  
Primary Examiner  
Art Unit 1745